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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/525,642	02/25/2005	Toshio Nakane	1226-109	8456
23117 7590 03/31/2008 NIXON & VANDERHYE, PC 901 NORTH GLEBE ROAD, 11TH FLOOR ARLINGTON, VA 22203				
EXAMINER				
LSTVOYB, GREGORY				
ART UNIT		PAPER NUMBER		
1796				
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/525,642

**Applicant(s)**

NAKANE ET AL.

**Examiner**

GREGORY LISTVOYB

**Art Unit**

1796

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 11 January 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 11-23 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 11-23 is/are rejected.
- 7) ☒ Claim(s) 20 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/CDC)
- Paper No(s)/Mail Date \_\_\_\_\_

- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Duplicate claims***

Claim 20 objected to under 37 CFR 1.75 as being a substantial duplicate of claim 19. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 11-12, 15-20, 22-23 rejected under 35 U.S.C. 102(b) as being anticipated by Linstid, III et al (US Patent 6222000), herein Linstid (necessitated by amendment).

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Linstid discloses amorphous wholly aromatic polyester amide and multilayered composition, film, sheet and multilayered contained based on it (see Column 3, line 10 and Column 16, line 20), where the polymer obtained by copolymerizing:

A 4-hydroxybenzoic acid-15-60%, preferably 20-40%

B 2-hydroxy-6-naphthoic acid 15-60%, preferably 20-40%(A/B ratio is always within the range of 0.15-4;

C p-aminophenol 5-20%, preferably 10-15% ;

D isophthalic acid 7-15 %, preferably 10-15% ;

E terephthalic acid 5-20%, preferably 10-15% (Columns 3-4) Note that the presence of terephthalic acid is not required. However, it is not prohibited by claim 11 as it written.

Glass transition temperatures of the above copolymers are about 150C (Column 6, line 5), whereas melting points  $T_m$  are not observed (Column 5, line 65). DSC measurements are made at 20 C/min temperature rising rate (Column 17, line 45).

Linstid teaches that the above liquid crystal copolymers may be used in combination with polyolefins, polyethylene terephthalate and polybutylene terephthalate (Column 3, line 10) for production of films, sheets, fibers, multi-layer laminates, blow-molded containers and other articles (Column 16, line 20).

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Regarding Claim 17, Linstid teaches preferable Tg of about 120C or less and melt processing with polyolefnes at 220c or less (see Column 6, line 10).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 13, 14 and 21 rejected under 35 U.S.C. 103(a) as being unpatentable over Linstid in combination with Furuta et al (US Patent 5612101) necessitated by amendment).

Linstid discloses amorphous wholly aromatic polyester amide and multi-layered composition based on it (see discussion above).

Linstid not specify that polyethylene in the composition is high density polyethylene.

Also, Linstid did not teach that blow-molded container, produced with his copolymer is a fuel tank.

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Hence attention directed towards the Furuta reference. Linstid and Furuta are analogous, because they are from the same field of endeavor, utilizing compositions based on liquid crystal copolymers.

Regarding Claims 13 and 21, Furuta discloses that polyethylene in his composition is high density polyethylene (HDPE) (Example 6, column 17).

It would have been obvious to a person of ordinary skills in the art to use HDPE with Linstid copolymers for high end applications, such as large blow molded containers, since HDPE has much better mechanical properties than LDPE due to its higher crystallinity.

Regarding Claim 14, Furuta discloses that his composition can be processed into a fuel tank (Comparative Example 6, Column 18).

It would have been obvious to a person of ordinary skills in the art to use a composition based on Linstid copolymers for manufacturing of fuel tanks, since Linstid's composition has an exceptional mechanical and barrier properties and ability to be processed by blow molding.

***Double Patenting***

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The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 11-23 provisionally rejected under 35 U.S.C. 101 as claiming the same invention as that of claims 17, 18, 21-24, 26 of copending Application No. 10/538845. This is a provisional double patenting rejection since the conflicting claims have not in fact been patented.

Although the conflicting claims are not identical, they are not patentably distinct from each other, because the Application No 10/538845 claims the composition based on the same liquid crystal polymer, which is fully encompassed by the claims of present Application.

### ***Response to Arguments***

Applicant's arguments filed on 1/11/2008 have been fully considered but they are not persuasive.

The Applicant argues that the disclosure of Linstid, II et al is quite broad and would not lead a skilled person to select the particular components as claimed herein by the present application to achieve the specific property of improved adhesiveness to another polymer resulting in a stable multilayer product. The Examiner disagrees.

Linstid explicitly teaches all the components listed in the corresponding Claims of the Application examined. The structure as claimed in Claim 17 does not preclude the use of other components in addition to ones listed in the Claim.

According to MPEP 2131.02 , a genus does not always anticipate a claim to a species within the genus. However, when the species is clearly named, the species claim is anticipated no matter how many other species are additionally named. *Ex parte A*, 17 USPQ2d 1716 (Bd. Pat. App. & Inter. 1990).

The effect of particular structure fragments in Listid disclosure is well known. Therefore, an artisan can vary the elements of the structure in order to achieve particular results (Modulus, adhesiveness, etc.).



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Regarding the Applicant's argument that Furuta merely discloses blending a liquid crystal polyester (LCP) with an olefin, Furuta discloses the above composition in the Abstract.

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to GREGORY LISTVOYB whose telephone number is (571)272-6105. The examiner can normally be reached on 10am-7pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on 571-272-1119. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Rabon Sergent/  
Primary Examiner, Art Unit 1796

GL  
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